JVC

SERVICE MANUAL

COLOUR TELEVISION

BASIC CHASSIS
CG

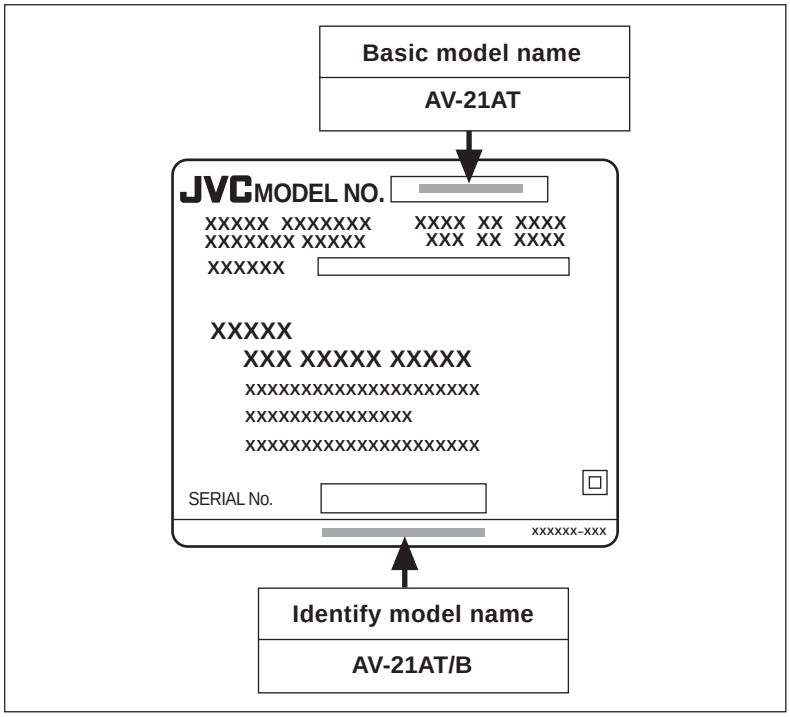
AV-21AT(B)

This service manual mainly consists of the following items:
• The items which differ from those for the AV-21AT service manual.
• The initial value for each setting item.
For details other than those described in this manual, please refer to the following service manual.
Reference Service Manual: AV-21AT Service Manual (No. 56013, May 2000)

Note: The page in parentheses shows the one for the AV-21AT service manual (No. 56013, May 2000).

HOW TO IDENTIFY MODEL

While referring to the illustration given below, identify model name on the rating label affixed to the rear cover.



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No. 56013B
Nov. 2000

PARTS DIFFERENCE TABLE

The different parts between AV-21AT and AV-21AT(B) are described below:

⚠	REF. NO.	AV-21AT PART No.	AV-21AT(B) PART No.	PART NAME	DESCRIPTION
■ EXPLODED VIEW PARTS LIST (Page 28)					
⚠	V01	A51LMV20X	———	PICTURE TUBE	
		———	**A51JSY63X15/CM/**	PICTURE TUBE	ITC Type
	DY01	CE20336-00A	———	DEF YOKE	
⚠	L01	QQW0006-001	**QQW0077-001**	DEGAUSSING COIL	
	8	CE42153-00AJ1	———	WEDGE ASSY	(x4)
	9	A75034-B	———	PC MAGNET	or CE42378-00B
	—	———	**LC40312-011A-H**	RUBBER WASHER	(x6)
	—	———	**CHGG0021-0A-G**	CONNECTOR ASSY	
	—	———	**LC30601-001A**	DEG HOLDER	
■ PRINTED WIRING BOARD PARTS LIST (Page 30-)					
	—	SCG-1247A-H2	**SCG-1272A-H2**	MAIN PWB ASSY	
	R1904	———	**QRL03EJ-151X**	OM R	150Ω 3W J
	C1525	QFZ0200-103	———	MPP CAP.	0.01µF 1.5kVH ±3%
		———	**QFZ0200-972**	MPP CAP.	9700pF 1.5kVH ±3%
	C1527	QFZ0199-224	———	MPP CAP.	0.22µF 250V J
		———	**QFZ0199-274**	MPP CAP.	0.27µF 250V J
	C1582	QFZ0199-224	———	MPP CAP.	0.22µF 250V J
		———	**QFZ0199-204**	MPP CAP.	0.2µF 250V J
	L1551	QQLZ018-430	**QQLZ018-460**	HEATER CHOKE	

SPECIFICATIONS (Page 2)

Item		Content
Dimensions (W × H × D)		502mm × 451mm × 480.5mm
Mass		19.5kg
TV RF System		B / G, I, D / K, K1
Colour System	TV Mode	PAL / SECAM
	VIDEO Mode	PAL / SECAM / NTSC3.58 / NTSC4.43
Receiving Frequency	VHF (VL)	46.25MHz ~ 168.25MHz
	VHF (VH)	175.25MHz ~ 463.25MHz
	UHF	471.25MHz ~ 863.25MHz
	CATV	● Cable TVs of Mid (X-Z, S1-S10) Super (S11-S20) & Hyper (S21-S41) bands receivable
Intermediate Frequency	VIF Carrier	38.0MHz
	SIF Carrier	31.5MHz (6.5MHz) 32.0MHz (6.0MHz) 32.5MHz (5.5MHz) 33.5MHz (4.5MHz)
Colour Sub Carrier Frequency		PAL (4.43MHz) SECAM (4.40625MHz / 4.25MHz) NTSC (3.58MHz / 4.43MHz)
Aerial Input Terminal		75Ω Unbalanced
Power Input		AC110 ~ 240V, 50 / 60Hz
Power Consumption		105W (Max.)/68W (Avg.)
Picture Tube		Visible size : 51cm measured diagonally
High Voltage		26.5kV ± 1.5kV (at zero beam current)
Speaker		5cm × 9 cm Oval type × 2
Audio Output		5W (Monaural)
Input	Video	1Vp-p, 75Ω
	Audio	500mVrms (–4dBs), High impedance
Output	Video	1Vp-p, 75Ω
	Audio	500mVrms (–4dBs), Low impedance
Headphone Jack		Stereo mini jack (3.5ø)
Remote Control Unit		RM-C364-1H (Battery size : AA/R06/UM-3 × 2)

Design & specifications are subject to change without notice.

SPECIFIC SERVICE INSTRUCTIONS

SETTING OF SYSTEM CONSTANT SET (Page 7)

Table 1

Setting item	Setting contents	Setting value
COLOUR	MULTI. → TRIPLE → PAL	TRIPLE
BILINGUAL	YES → NO	NO
TUNER	MU → MA	MU
ECO SENSOR	YES → NO	YES
LANGUAGE	E/R/C/U → E/R/C → E/R/U → E/C	E/R/C
B/B SOUND	ON → OFF	OFF
LOCK	YES ↔ 10 ↔ 20 ↔ ... ↔ 230 ↔ 240 ↔ 250	180
COLOUR AUTO	YES → NO	NO
QSS	MINT → MQSS	MINT
ALC	YES → NO	NO
TEXT RATE	10 ↔ 20 ↔ 40 ↔ 80	20
AMP TUNER	YES → NO	NO
VNR	YES → NO	YES
EW-PIN IC	YES → NO	NO

USER SETTING VALUES (Page 7)

Table 2

Setting item	Setting value	Setting item	Setting value
SUB POWER	ON	PICTURE MODE (VSM)	BRIGHT
CHANNEL POSITION	1 POSITION	VNR	OFF
CHANNEL PRESET	Refer to OPERATING INSTRUCTION	OFF TIMER	OFF
		LANGUAGE	ENGLISH
VOLUME	Appropriate sound volume	AUTO SHUTOFF	OFF
TV/VIDEO	TV	ECO SENSOR	OFF
ON SCREEN DISPLAY	POSITION NUMBER DISPLAY	BLUE BACK	OFF
COLOUR SYSTEM	AUTO PAL	ON TIMER	PR1 0:00
SOUND SYSTEM	B / G	CHILD LOCK	OFF

SERVICE ADJUSTMENTS

■ Initial Setting Value

■ IF CIRCUIT ADJUSTMENT -- Adjustment of DELAY POINT (Page 15)

Setting (Adjustment) Item	Variable range	Initial setting value
DELAY POINT (AGC TAKE-OVER)	0 ~ 127	43

■ V/C (VIDEO/CHROMA) CIRCUIT ADJUSTMENT (Page 15)

[SUB MENU 2. V/C]

Setting item \ Colour system		Variable range	Initial setting value			
			PAL	SECAM	NTSC 3.58	NTSC 4.43
1. CUT OFF (R / G / B)		–128 ~ +127	–50	←	←	←
2. DRIVE (R / B)		–64 ~ +63	0	←	←	←
3. BRIGHT		–128 ~ +127	0	←	←	←
4. CONT.		–64 ~ +63	0	←	←	←
5. COLOUR (P / S / N3 / N4)		–64 ~ +63	0	←	←	←
6. TINT (N3 / N4)	TV / VIDEO	–64 ~ +63	———	———	0 / 0	0 / 0
7. SECAM BL ADJUST		–32 ~ +31	0	←	←	←
8. SHARP	TV / VIDEO	–32 ~ +31	–5 / +15	←	←	←

: Do not adjust.

Adjustment of SUB COLOUR-II (Page 18)

Adjustment part	Description
5. COLOUR	
PAL COLOUR	Value **(A)** in the figure: Set to **+6V (W & G)**.
SECAM COLOUR	Value **(A)** in the figure: Set to **+10V (W & G)**.
NTSC 3.58 COLOUR	Value **(A)** in the figure: Set to **+2V (W & G)**.

Adjustment of SUB TINT-II (Page 19)

Adjustment part	Description
6. TINT	
NTSC 3.58 TINT	Value **(B)** in the figure: Set to **+2V (W & Cy).**

■ DEFLECTION CIRCUIT ADJUSTMENT (Page 20)

[SUB MENU 3. DEF]

Setting item	Adjustment name	Variable range	Initial setting value	
			50Hz	60Hz
1. VER. POSITION	Vertical center	–4 ~ +3	–1	–3
2. HOR. POSITION	Horizontal center	–16 ~ +15	+3	+3
3. VER. HEIGHT	Vertical height	–64 ~ +63	–35	+1
4. VER. LINEARITY	Vertical linearity	–32 ~ +31	+15	–1
5. VER. SCURVE	Vertical scurve	–32 ~ +31	–32	0
6. HOR. VCO ADJUST	Horizontal VCO	–64 ~ +63	0	0

: Do not adjust.

■ VSM PRESET ADJUSTMENT (Page 22)

[Setting Values for SUB MENU 4. VSM PRESET]

VSM preset / VSM mode / Setting item	BRIGHT	STANDARD	SOFT
TINT SETTING VALUE	+15	←	←
COLOUR SETTING VALUE	+15	←	←
BRIGHT SETTING VALUE	+15	←	←
CONT. SETTING VALUE	+30	+15	+11
SHARP SETTING VALUE	+15	+15	+12

: Do not adjust.

■ PRESET ADJUSTMENT (Page 23)

[SUB MENU 5. PRESET]

Setting item \ Colour system		Initial setting value			
		PAL	SECAM	NTSC 3.58	NTSC 4.43
1. C-TRAP FIX		1	←	←	←
2. SHARP PEAK		0	←	←	←
3. ABL		1	←	←	←
4. GAMMA		0	←	←	←
5. Y.DELAY TIME	TV	0	2	2	3
	VIDEO	0	2	0	2
6. BLACK EXP START		3	←	←	←
7. C-BPF	TV	1	←	0	←
	VIDEO	1	←	←	←
8. CW/SCP		0	←	←	←
9. V.IF DET. LEVEL		0	←	←	←
11. IF AGC MIN.		0	←	←	←
12. V.IF AGC		0	←	←	←
13. V.IF PMOD		0	←	←	←
19. VNR		15	←	←	←
20. RGB LIM.		1	←	←	←
21. RGB LIMIT LEVEL		2	←	←	←
23. TEXT H. POSITION		–3	←	←	←
24. READ DATA		———	———	———	———

: Do not adjust.

Setting item \ TV RF system	Initial setting value			
	B/G	I	D/K	M
10. S.IF DET. LEVEL	0	←	←	←
14. S.IF BPF BW ADJUST	0	←	←	←
15. S.IF TRAP FO ADJUST	0	←	←	←
16. S.IF TRAP FO ADJUST 2	0	←	←	←
17. S.IF-TRAP	0	←	←	←
18. S.IF-BPF	0	←	←	1
22. S.IF SW	1	←	←	0

: Do not adjust.

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